

--22. (New) An isolated polynucleotide comprising a nucleic acid sequence encoding an amino acid sequence identical to, except for up to five amino acid alterations per 100 amino acids, an amino acid sequence selected from the group consisting of:

- (a) SEQ ID NO:42;
- (b) SEQ ID NO:56;
- (c) SEQ ID NO:66;
- (d) SEQ ID NO:68;
- (e) SEQ ID NO:140;
- (f) SEQ ID NO:158;
- (g) SEQ ID NO:178;
- (h) SEQ ID NO:218;
- (i) SEQ ID NO:220;
- (j) SEQ ID NO:222; and

(k) the complement of a polynucleotide encoding the amino acid sequence of (a), (b), (c), (d), (e), (f), (g), (h), (i), or (j).

23. (New) The isolated polynucleotide of claim 22, wherein said amino acid sequence is (a).

24. (New) The isolated polynucleotide of claim 23, wherein said amino acid sequence is SEQ ID NO:42.

25. (New) The isolated polynucleotide of claim 22, wherein said amino acid sequence is (b).

26. (New) The isolated polynucleotide of claim 25, wherein said amino acid sequence is SEQ ID NO:56.

27. (New) The isolated polynucleotide of claim 22, wherein said amino acid sequence is (c).

28. (New) The isolated polynucleotide of claim 27, wherein said amino acid sequence is SEQ ID NO:66.

29. (New) The isolated polynucleotide of claim 22, wherein said amino acid sequence is (d).

30. (New) The isolated polynucleotide of claim 29, wherein said amino acid sequence is SEQ ID NO:68.

31. (New) The isolated polynucleotide of claim 22, wherein said amino acid sequence is (e).

32. (New) The isolated polynucleotide of claim 31, wherein said amino acid sequence is SEQ ID NO:140.

33. (New) The isolated polynucleotide of claim 22, wherein said amino acid sequence is (f).

34. (New) The isolated polynucleotide of claim 33, wherein said amino acid sequence is SEQ ID NO:158.

35. (New) The isolated polynucleotide of claim 22, wherein said amino acid sequence is (g).

36. (New) The isolated polynucleotide of claim 35, wherein said amino acid sequence is SEQ ID NO:178.

37. (New) The isolated polynucleotide of claim 22, wherein said amino acid sequence is (h).

38. (New) The isolated polynucleotide of claim 37, wherein said amino acid sequence is SEQ ID NO:218.

39. (New) The isolated polynucleotide of claim 22, wherein said amino acid sequence is (i).

40. (New) The isolated polynucleotide of claim 39, wherein said amino acid sequence is SEQ ID NO:220.

41. (New) The isolated polynucleotide of claim 22, wherein said amino acid sequence is (j).

42. (New) The isolated polynucleotide of claim 41, wherein said amino acid sequence is SEQ ID NO:222.

43. (New) The isolated polynucleotide of claim 22, wherein said polynucleotide comprises a heterologous polynucleotide sequence.

44. (New) The isolated polynucleotide of claim 43, wherein said heterologous polynucleotide sequence encodes a polypeptide.

45. (New) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 22 into a vector.

46. (New) A recombinant vector comprising the isolated polynucleotide of claim 22.

47. (New) The recombinant vector of claim 46, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

48. (New) A recombinant host cell comprising the isolated polynucleotide of claim 22.

49. (New) The recombinant host cell of claim 48, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

50. (New) A method for producing a polypeptide, comprising:
(a) culturing a host cell under conditions suitable to produce a polypeptide encoded by the polynucleotide of claim 22; and
(b) recovering the polypeptide from the cell culture.

51. (New) A polypeptide produced by the method of claim 50.

52. (New) An isolated polynucleotide comprising a nucleic acid sequence encoding an epitope-bearing portion of an amino acid sequence selected from the group consisting of:

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cont.
- (a) SEQ ID NO:42;
 - (b) SEQ ID NO:56;
 - (c) SEQ ID NO:68;
 - (d) SEQ ID NO:140;
 - (e) SEQ ID NO:178;
 - (f) SEQ ID NO:218;
 - (g) SEQ ID NO:220; and
 - (h) SEQ ID NO:222.

53. (New) The isolated polynucleotide of claim 52, wherein said amino acid sequence is (a).

54. (New) The isolated polynucleotide of claim 52, wherein said amino acid sequence is (b).

55. (New) The isolated polynucleotide of claim 52, wherein said amino acid sequence is (c).

56. (New) The isolated polynucleotide of claim 52, wherein said amino acid sequence is (d).

57. (New) The isolated polynucleotide of claim 52, wherein said amino acid sequence is (e).

58. (New) The isolated polynucleotide of claim 52, wherein said amino acid sequence is (f).

59. (New) The isolated polynucleotide of claim 52, wherein said amino acid sequence is (g).

60. (New) The isolated polynucleotide of claim 52, wherein said amino acid sequence is (h).

61. (New) The isolated polynucleotide of claim 52, wherein said polynucleotide comprises a heterologous polynucleotide sequence.

62. (New) The isolated polynucleotide of claim 61, wherein said heterologous polynucleotide sequence encodes a polypeptide.

63. (New) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 52 into a vector.

64. (New) A recombinant vector comprising the isolated polynucleotide of claim 52.

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65. (New) The recombinant vector of claim 64, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

66. (New) A recombinant host cell comprising the isolated polynucleotide of claim 52.

67. (New) The recombinant host cell of claim 66, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

68. (New) A method for producing a polypeptide, comprising:
(a) culturing a host cell under conditions suitable to produce a polypeptide encoded by the polynucleotide of claim 52; and
(b) recovering the polypeptide from the cell culture.

69. (New) A polypeptide produced by the method of claim 68.

70. (New) The isolated polynucleotide of claim 53, wherein said epitope-bearing portion comprises an amino acid sequence selected from the group consisting of:

- (a) Asp-171 to Pro-179 of SEQ ID NO:42;
- (b) Tyr-340 to Glu-350 of SEQ ID NO:42;
- (c) Pro-455 to Tyr-463 of SEQ ID NO:42; and
- (d) Asp-474 to Pro-480 of SEQ ID NO:42.

71. (New) The isolated polynucleotide of claim 54, wherein said epitope-bearing portion comprises an amino acid sequence selected from the group consisting of:

- (a) Arg-10 to Arg-17 of SEQ ID NO:56;
- (b) Lys-29 to Ser-39 of SEQ ID NO:56;
- (c) Ser-140 to Ala-153 of SEQ ID NO:56;
- (d) Arg-158 to Tyr-169 of SEQ ID NO:56;
- (e) Asp-175 to Ala-183 of SEQ ID NO:56;
- (f) Gly-216 to Asn-236 of SEQ ID NO:56;
- (g) Ala-261 to Leu-270 of SEQ ID NO:56;
- (h) Arg-282 to Phe-291 of SEQ ID NO:56;
- (i) Thr-297 to Ala-305 of SEQ ID NO:56;
- (j) Pro-342 to Gln-362 of SEQ ID NO:56;
- (k) Phe-455 to Asp-463 of SEQ ID NO:56;
- (l) His-497 to Thr-511 of SEQ ID NO:56;
- (m) Ala-521 to Gly-529 of SEQ ID NO:56;
- (n) Ile-537 to Val-546 of SEQ ID NO:56;
- (o) Ile-556 to Ala-568 of SEQ ID NO:56;
- (p) Pro-581 to Ser-595 of SEQ ID NO:56;
- (q) Glu-670 to Ala-685 of SEQ ID NO:56;
- (r) Ser-696 to Ala-705 of SEQ ID NO:56 and
- (s) Leu-782 to Ser-791 of SEQ ID NO:56.

72. (New) The isolated polynucleotide of claim 55, wherein said epitope-bearing portion comprises an amino acid sequence selected from the group consisting of:

- (a) Lys-2 to Asp-12 of SEQ ID NO:68;
- (b) Val-58 to Asn-68 of SEQ ID NO:68;
- (c) Ser-87 to Asp-95 of SEQ ID NO:68; and

(d) Asp-102 to Lys-117 of SEQ ID NO:68.

73. (New) The isolated polynucleotide of claim 56, wherein said epitope-bearing portion comprises an amino acid sequence selected from the group consisting of:

- (a) Ile-101 to Ser-187 of SEQ ID NO:140;
- (b) Gly-191 to Asn-221 of SEQ ID NO:140;
- (c) Arg-225 to Arg-236 of SEQ ID NO:140;
- (d) Tyr-239 to Leu-255 of SEQ ID NO:140; and
- (e) Gly-259 to Arg-268 of SEQ ID NO:140.

74. (New) The isolated polynucleotide of claim 57, wherein said epitope-bearing portion comprises an amino acid sequence selected from the group consisting of:

- (a) Glu-23 to Glu-31 of SEQ ID NO:178;
- (b) Glu-40 to Val-48 of SEQ ID NO:178;
- (c) Gln-50 to Ser-58 of SEQ ID NO:178;
- (d) Thr-61 to Ile-69 of SEQ ID NO:178;
- (e) Leu-82 to Ile-90 of SEQ ID NO:178;
- (f) Ala-108 to Leu-116 of SEQ ID NO:178;
- (g) Gln-121 to Pro-129 of SEQ ID NO:178; and
- (h) Leu-130 to Thr-138 of SEQ ID NO:178.

75. (New) The isolated polynucleotide of claim 58, wherein said epitope-bearing portion comprises an amino acid sequence selected from the group consisting of:

- (a) Val-4 to Asn-12 of SEQ ID NO:218;
- (b) Glu-47 to Leu-55 of SEQ ID NO:218;
- (c) Lys-89 to Glu-100 of SEQ ID NO:218;
- (d) Ser-165 to Thr-173 of SEQ ID NO:218;
- (e) Lys-234 to Val-242 of SEQ ID NO:218;
- (f) Ser-258 to Ser-266 of SEQ ID NO:218;
- (g) Glu-284 to Asn-292 of SEQ ID NO:218;
- (h) Tyr-327 to Leu-335 of SEQ ID NO:218;
- (i) Tyr-457 to Thr-465 of SEQ ID NO:218;
- (j) Tyr-493 to Glu-501 of SEQ ID NO:218;
- (k) Thr-506 to Tyr-514 of SEQ ID NO:218;

- (l) Lys-517 to Thr-525 of SEQ ID NO:218;
- (m) Asn-532 to Gly-540 of SEQ ID NO:218; and
- (n) Arg-556 to Glu-564 of SEQ ID NO:218.

76. (New) The isolated polynucleotide of claim 59, wherein said epitope-bearing portion comprises an amino acid sequence selected from the group consisting of:

- (a) Arg-16 to Glu-24 of SEQ ID NO:220;
- (b) Gln-52 to Arg-60 of SEQ ID NO:220;
- (c) Asn-69 to Tyr-77 of SEQ ID NO:220;
- (d) Glu-121 to Asn-129 of SEQ ID NO:220;
- (e) Ala-134 to Val-142 of SEQ ID NO:220;
- (f) Thr-151 to Ala-159 of SEQ ID NO:220;
- (g) Asn-164 to Glu-172 of SEQ ID NO:220;
- (h) His-181 to His-189 of SEQ ID NO:220;
- (i) Thr-210 to Ala-218 of SEQ ID NO:220;
- (j) Ser-244 to Val-252 of SEQ ID NO:220;
- (k) Phe-287 to Tyr-297 of SEQ ID NO:220;
- (l) Ser-312 to Thr-323 of SEQ ID NO:220;
- (m) His-433 to Tyr-441 of SEQ ID NO:220;
- (n) Ser-445 to Asn-453 of SEQ ID NO:220;
- (o) Asn-469 to Thr-477 of SEQ ID NO:220;
- (p) Asn-501 to Asn-509 of SEQ ID NO:220;
- (q) Gln-536 to Ala-547 of SEQ ID NO:220; and
- (r) Gln-608 to Asp-621 of SEQ ID NO:220.

77. (New) The isolated polynucleotide of claim 60, wherein said epitope-bearing portion comprises an amino acid sequence selected from the group consisting of:

- (a) Ser-9 to Asp-21 of SEQ ID NO:222;
- (b) Ala-28 to Leu-36 of SEQ ID NO:222;
- (c) Asn-49 to Phe-57 of SEQ ID NO:222;
- (d) Val-137 to Arg-145 of SEQ ID NO:222;
- (e) Asn-155 to Leu-163 of SEQ ID NO:222;
- (f) Glu-183 to Asp-191 of SEQ ID NO:222;
- (g) Gly-202 to Tyr-210 of SEQ ID NO:222;
- (h) Pro-221 to Asp-229 of SEQ ID NO:222;

- (i) Phe-263 to Ala-271 of SEQ ID NO:222;
(j) Phe-300 to Gln-308 of SEQ ID NO:222;
(k) Asp-313 to Glu-321 of SEQ ID NO:222;
(l) Asn-324 to Asp-332 of SEQ ID NO:222;
(m) Ile-346 to Asn-354 of SEQ ID NO:222;
(n) Asp-362 to Lys-370 of SEQ ID NO:222;
(o) Met-402 to Gly-410 of SEQ ID NO:222;
(p) Gly-437 to Gly-445 of SEQ ID NO:222;
(q) Ser-471 to Glu-483 of SEQ ID NO:222;
(r) Gly-529 to Asp-537 of SEQ ID NO:222;
(s) Gln-555 to Val-563 of SEQ ID NO:222; and
(t) Leu-579 to Lys-587 of SEQ ID NO:222.

78. (New) An isolated polynucleotide comprising a nucleic acid sequence encoding an epitope-bearing portion of the amino acid sequence of SEQ ID NO:66, wherein said epitope-bearing portion comprises an amino acid sequence selected from the group consisting of:

- (a) Gly-11 to Arg-19;
(b) Ile-23 to Lys-31;
(c) His-145 to Asn-151;
(d) Gln-159 to Asp-166;
(e) Ile-175 to Asp-181;
(f) Gly-213 to Tyr-225;
(g) Ile-283 to Val-291;
(h) Pro-329 to Glu-364;
(i) Arg-372 to Ser-386;
(j) Thr-421 to Phe-430;
(k) Leu-445 to Val-453;
(l) Ile-486 to Ala-497; and
(m) Asp-524 to Ala-535.

79. (New) The isolated polynucleotide of claim 78, wherein said epitope-bearing portion comprises (a) and (b).

80. (New) The isolated polynucleotide of claim 78, wherein said epitope-bearing portion comprises (l) and (m).

81. (New) The isolated polynucleotide of claim 78, wherein said amino acid sequence is (h).

82. (New) The isolated polynucleotide of claim 78, wherein said amino acid sequence is (i).

83. (New) The isolated polynucleotide of claim 78, wherein said polynucleotide comprises a heterologous polynucleotide sequence.

84. (New) The isolated polynucleotide of claim 83, wherein said heterologous polynucleotide sequence encodes a polypeptide.

85. (New) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 78 into a vector.

86. (New) A recombinant vector comprising the isolated polynucleotide of claim 78.

87. (New) The recombinant vector of claim 86, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

88. (New) A recombinant host cell comprising the isolated polynucleotide of claim 78.

89. (New) The recombinant host cell of claim 88, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

90. (New) A method for producing a polypeptide, comprising:
 (a) culturing a host cell under conditions suitable to produce a polypeptide encoded by the polynucleotide of claim 78; and
 (b) recovering the polypeptide from the cell culture.

91. (New) A polypeptide produced by the method of claim 90.

92. (New) An isolated polynucleotide comprising a nucleic acid sequence encoding an epitope-bearing portion of the amino acid sequence of SEQ ID NO:158, wherein said epitope-bearing portion comprises an amino acid sequence selected from the group consisting of:

- (a) Val-51 to Gln-59;
- (b) Asn-75 to Asn-83;
- (c) Ile-103 to Trp-111;
- (d) Tyr-113 to Ala-121;
- (e) Leu-175 to Asn-183;
- (f) Glu-185 to Trp-193;
- (g) Ala-203 to Tyr-211;
- (h) Val-250 to Phe-258;
- (i) Asn-260 to Thr-268;
- (j) Ser-278 to Asp-286;
- (k) Tyr-305 to Leu-313;
- (l) Asn-316 to Gly-324;
- (m) Asn-374 to Asp-382;
- (n) Asn-441 to Gly-449; and
- (o) Ser-454 to Gln-462.

93. (New) The isolated polynucleotide of claim 92, wherein said epitope-bearing portion comprises (a) and (b).

94. (New) The isolated polynucleotide of claim 92, wherein said epitope-bearing portion comprises (f) and (g).

95. (New) The isolated polynucleotide of claim 92, wherein said epitope-bearing portion comprises (n) and (o).

96. (New) The isolated polynucleotide of claim 92, wherein said polynucleotide comprise a heterologous polynucleotide sequence.

97. (New) The isolated polynucleotide of claim 96, wherein said heterologous polynucleotide sequence encodes a polypeptide.

98. (New) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 92 into a vector.

99. (New) A recombinant vector comprising the isolated polynucleotide of claim 92.

100. (New) The recombinant vector of claim 99, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

101. (New) A recombinant host cell comprising the isolated polynucleotide of claim 92.

102. (New) The recombinant host cell of claim 101, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

103. (New) A method for producing a polypeptide, comprising:
(a) culturing a host cell under conditions suitable to produce a polypeptide encoded by the polynucleotide of claim 92; and
(b) recovering the polypeptide from the cell culture.

104. (New) A polypeptide produced by the method of claim 103.

105. (New) An isolated polynucleotide comprising a nucleic acid sequence encoding at least 15 contiguous amino acid residues of an polynucleotide sequence selected from the group consisting of:

- (a) SEQ ID NO:42;
- (b) SEQ ID NO:56;
- (c) SEQ ID NO:68;
- (d) SEQ ID NO:140;
- (e) SEQ ID NO:178;
- (f) SEQ ID NO:218;
- (g) SEQ ID NO:220; and
- (h) SEQ ID NO:222.

106. (New) The isolated polynucleotide of claim 105, wherein said polynucleotide sequence is (a).

107. (New) The isolated polynucleotide of claim 105, wherein said polynucleotide sequence is (b).

108. (New) The isolated polynucleotide of claim 105, wherein said polynucleotide sequence is (c).

109. (New) The isolated polynucleotide of claim 105, wherein said polynucleotide sequence is (d).

110. (New) The isolated polynucleotide of claim 105, wherein said polynucleotide sequence is (e).

111. (New) The isolated polynucleotide of claim 105, wherein said polynucleotide sequence is (f).

112. (New) The isolated polynucleotide of claim 105, wherein said polynucleotide sequence is (g).

113. (New) The isolated polynucleotide of claim 105, wherein said polynucleotide sequence is (h).

114. (New) The isolated polynucleotide of claim 105, wherein said polynucleotide comprises a heterologous polynucleotide sequence.

115. (New) The isolated polynucleotide of claim 114, wherein said heterologous polynucleotide sequence encodes a polypeptide.

116. (New) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 105 into a vector.

117. (New) A recombinant vector comprising the isolated polynucleotide of claim 105.

118. (New) The recombinant vector of claim 117, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

119. (New) A recombinant host cell comprising the isolated polynucleotide of claim 105.

120. (New) The recombinant host cell of claim 119, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

121. (New) A method for producing a polypeptide, comprising:
(a) culturing a host cell under conditions suitable to produce a polypeptide encoded by the polynucleotide of claim 105; and
(b) recovering the polypeptide from the cell culture.
122. A polypeptide produced by the method of claim 121.
123. (New) The isolated polynucleotide of claim 105; wherein said polynucleotide comprises a nucleic acid sequence encoding at least 30 contiguous amino acid residues of an amino acid sequence selected from the group consisting of:
(a) SEQ ID NO:42;
(b) SEQ ID NO:56;
(c) SEQ ID NO:68;
(d) SEQ ID NO:140;
(e) SEQ ID NO:178;
(f) SEQ ID NO:218;
(g) SEQ ID NO:220; and
(h) SEQ ID NO:222.
124. (New) The isolated polynucleotide of claim 123, wherein said amino acid sequence is (a).
125. (New) The isolated polynucleotide of claim 123, wherein said amino acid sequence is (b).
126. (New) The isolated polynucleotide of claim 123, wherein said amino acid sequence is (c).
127. (New) The isolated polynucleotide of claim 123, wherein said amino acid sequence is (d).
128. (New) The isolated polynucleotide of claim 123, wherein said amino acid sequence is (e).
129. (New) The isolated polynucleotide of claim 123, wherein said amino acid sequence is (f).
130. (New) The isolated polynucleotide of claim 123, wherein said amino acid sequence is (g).
131. (New) The isolated polynucleotide of claim 123, wherein said amino acid sequence is (h).

132. (New) The isolated polynucleotide of claim 123, wherein said polynucleotide comprises a heterologous polynucleotide sequence.

133. (New) The isolated polynucleotide of claim 132, wherein said heterologous polynucleotide sequence encodes a polypeptide.

134. (New) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 123 into a vector.

135. (New) A recombinant vector comprising the isolated polynucleotide of claim 123.

136. (New) The recombinant vector of claim 135, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

137. (New) A recombinant host cell comprising the isolated polynucleotide of claim 123.

138. (New) The recombinant host cell of claim 137, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

139. (New) A method for producing a polypeptide, comprising:
(a) culturing a host cell under conditions suitable to produce a polypeptide encoded by the polynucleotide of claim 123; and
(b) recovering the polypeptide from the cell culture.

140. (New) A polypeptide produced by the method of claim 139.

141. (New) An isolated polynucleotide comprising a nucleic acid sequence which hybridizes under stringent hybridization conditions to a nucleic acid sequence selected from the group consisting of:

- (a) SEQ ID NO:41;
- (b) SEQ ID NO:55;
- (c) SEQ ID NO:67;
- (d) SEQ ID NO:139;

- (e) SEQ ID NO:177;
(f) SEQ ID NO:217;
(g) SEQ ID NO:219;
(h) SEQ ID NO:221; and
(i) the complementary strand of (a), (b), (c), (d), (e), (f), (g), or (h).

142. (New) The isolated polynucleotide of claim 141, wherein said nucleic acid sequence is (a).

143. (New) The isolated polynucleotide of claim 141, wherein said nucleic acid sequence is (b).

144. (New) The isolated polynucleotide of claim 141, wherein said nucleic acid sequence is (c).

145. (New) The isolated polynucleotide of claim 141, wherein said nucleic acid sequence is (d).

146. (New) The isolated polynucleotide of claim 141, wherein said nucleic acid sequence is (e).

147. (New) The isolated polynucleotide of claim 141, wherein said nucleic acid sequence is (f).

148. (New) The isolated polynucleotide of claim 141, wherein said nucleic acid sequence is (g).

149. (New) The isolated polynucleotide of claim 141, wherein said nucleic acid sequence is (h).

150. (New) The isolated polynucleotide of claim 141, wherein said nucleic acid sequence is (i).

151. (New) The isolated polynucleotide of claim 141, wherein said polynucleotide comprises a heterologous polynucleotide sequence.

152. (New) The isolated polynucleotide of claim 151, wherein said heterologous polynucleotide sequence encodes a polypeptide.

153. (New) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 141 into a vector.

154. (New) A recombinant vector comprising the isolated polynucleotide of claim 141.

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155. (New) The recombinant vector of claim 154, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

156. (New) A recombinant host cell comprising the isolated polynucleotide of claim 141.

157. (New) The recombinant host cell of claim 156, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

158. (New) A method for producing a polypeptide, comprising:
(a) culturing a host cell under conditions suitable to produce a polypeptide encoded by the polynucleotide of claim 141; and
(b) recovering the polypeptide from the cell culture.

159. (New) A polypeptide produced by the method of claim 158.

160. (New) An isolated polynucleotide comprising at least 50 contiguous nucleotides of a nucleic acid sequence selected from the group consisting of:

- (a) SEQ ID NO:41;
- (b) SEQ ID NO:55;
- (c) SEQ ID NO:67;
- (d) SEQ ID NO:139;
- (e) SEQ ID NO:177;
- (f) SEQ ID NO:217;
- (g) SEQ ID NO:219;
- (h) SEQ ID NO:221; and
- (i) the complementary strand of (a), (b), (c), (d), (e), (f), (g), or (h).

161. (New) The isolated polynucleotide of claim 160, wherein said nucleic acid sequence is (a).

162. (New) The isolated polynucleotide of claim 160, wherein said nucleic acid sequence is (b).

163. (New) The isolated polynucleotide of claim 160, wherein said nucleic acid sequence is (c).

164. (New) The isolated polynucleotide of claim 160, wherein said nucleic acid sequence is (d).

165. (New) The isolated polynucleotide of claim 160, wherein said nucleic acid sequence is (e).

166. (New) The isolated polynucleotide of claim 160, wherein said nucleic acid sequence is (f).

167. (New) The isolated polynucleotide of claim 160, wherein said nucleic acid sequence is (g).

168. (New) The isolated polynucleotide of claim 160, wherein said nucleic acid sequence is (h).

169. (New) The isolated polynucleotide of claim 160, wherein said nucleic acid sequence is (i).

170. (New) The isolated polynucleotide of claim 160, wherein said polynucleotide comprises a heterologous polynucleotide sequence.

171. (New) The isolated polynucleotide of claim 170, wherein said heterologous polynucleotide sequence encodes a polypeptide.

172. (New) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 160 into a vector.

173. (New) A recombinant vector comprising the isolated polynucleotide of claim 160.

174. (New) The recombinant vector of claim 173, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

175. (New) A recombinant host cell comprising the isolated polynucleotide of claim 160.

176. (New) The recombinant host cell of claim 175, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

177. (New) A method for producing a polypeptide, comprising:

- (a) culturing a host cell under conditions suitable to produce a polypeptide encoded by the polynucleotide of claim 160; and
(b) recovering the polypeptide from the cell culture.

178. (New) A polypeptide produced by the method of claim 177.

179. (New) An isolated polynucleotide comprising at least 100 contiguous nucleotides of a nucleic acid sequence selected from the group consisting of:

- (a) SEQ ID NO:41;
(b) SEQ ID NO:55;
(c) SEQ ID NO:67;
(d) SEQ ID NO:139;
(e) SEQ ID NO:177;
(f) SEQ ID NO:217;
(g) SEQ ID NO:219;
(h) SEQ ID NO:221; and
(i) the complementary strand of (a), (b), (c), (d), (e), (f), (g), or (h).

180. (New) The isolated polynucleotide of claim 179, wherein said nucleic acid sequence is (a).

181. (New) The isolated polynucleotide of claim 179, wherein said nucleic acid sequence is (b).

182. (New) The isolated polynucleotide of claim 179, wherein said nucleic acid sequence is (c).

183. (New) The isolated polynucleotide of claim 179, wherein said nucleic acid sequence is (d).

184. (New) The isolated polynucleotide of claim 179, wherein said nucleic acid sequence is (e).

185. (New) The isolated polynucleotide of claim 179, wherein said nucleic acid sequence is (f).

186. (New) The isolated polynucleotide of claim 179, wherein said nucleic acid sequence is (g).

187. (New) The isolated polynucleotide of claim 179, wherein said nucleic acid sequence is (h).

188. (New) The isolated polynucleotide of claim 179, wherein said nucleic acid sequence is (i).

189. (New) The isolated polynucleotide of claim 179, wherein said polynucleotide is a heterologous polynucleotide sequence.

190. (New) The isolated polynucleotide of claim 189, wherein said heterologous polynucleotide encodes a polypeptide.

191. (New) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 179 into a vector.

192. (New) A recombinant vector comprising the isolated polynucleotide of claim 179.

193. (New) The recombinant vector of claim 192, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

194. (New) A recombinant host cell comprising the isolated polynucleotide of claim 179.

195. (New) The recombinant host cell of claim 194, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

196. (New) A method for producing a polypeptide, comprising:
(a) culturing a host cell under conditions suitable to produce a polypeptide encoded by the polynucleotide of claim 179; and
(b) recovering the polypeptide from the cell culture.

197. (New) A polypeptide produced by the method of claim 196. --

Remarks

Claims 1-9, 12, 13, 15, 16, 19, and 20 have been canceled. Claims 22-197 have been added. Applicants submit that the subject matter of new claims 22-197 fall within the scope of Group I, as defined by the Examiner in the Office Action mailed 26 October 1998. The newly filed claims find support in the claims as originally filed and throughout the specification. Thus, no new matter has been added to any of the newly added claims.